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(54) **EPCAM ANTIBODY AND CAR-T CELLS**

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(57) **ABSTRACT**

The present invention provides EpCAM antibodies with different affinities. The present invention also provides chimeric antigen receptors (CARs) specific to EpCAM. CAR T cells comprising human EpCAM scFv having a low and sufficient affinity to EpCAM can avoid targeting healthy tissues with low EpCAM expression while exhibiting long-term efficacy against tumor tissues with high EpCAM expression. The present invention also relates to an adoptive cell therapy method for treating cancer by administering the CAR-T cells comprising human EpCAM scFv to a subject suffering from cancer, whereby the CAR T cells bind to the cancer cells overexpressing EpCAM and kill the cancer cells.

Specification includes a Sequence Listing.